

Innovation and Change: Lessons from the Global Cities Education Network

Christina A. Russell



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EXECUTIVE SUMMARY

The Global Cities Education Network (GCEN) is an international learning community of urban systems in Asia and North America launched by Asia Society in 2012. Through participation in the GCEN, teams of high-ranking city officials commit to sharing ideas; learning from one another and from global best practice; and strategically identifying, designing, and implementing systemic reforms and innovations that support educational success for all students. Asia Society's Center for Global Education serves as the convener of the GCEN, identifies expert advisors and resources, organizes an annual symposium hosted by one of the GCEN cities, and plans working group meetings that delve deeply into issues focused on specific topic areas identified in partnership with city systems. In spring 2015, Asia Society commissioned Policy Studies Associates (PSA) to conduct an evaluation of the GCEN. The key findings and recommendations that emerged from the evaluation are summarized below.

The evaluation identified several strengths of the network itself that supported movement towards innovation:

- 1. First, the GCEN has created a community of practice among participating systems in which all have opportunities both to share strengths and to learn; no system is seen as having all the answers, and every system is seen as having something to contribute.
- 2. Second, the GCEN provides access to international expertise and experience that challenges systems to reflect on local challenges in new ways, and that lends credibility to new ideas and practices that are brought back to local systems.
- 3. Third, the GCEN has supported cities both through exposure to new practices and through access to new tools and processes for supporting implementation and innovation, and for systematically identifying, testing, and refining innovative solutions.

Bolstered by the community of practice, city systems have begun to implement new strategies and ideas, influenced by increased knowledge of effective practices learned from other GCEN cities and by deep topic explorations at GCEN meetings, and grounded in action plans that participating teams have developed to address the local problems of practice that they have chosen to grapple with as a focus of their GCEN participation. City systems are piloting new approaches to career and technical learning, creating teacher-led professional learning communities, leveraging knowledge from the GCEN to share global trends in education and to engage the public and private sectors around common educational goals, and using improvement science methods to

more systematically approach change efforts. The evaluation identified two factors that have enabled cities to maximize the benefits of the GCEN and progress towards implementing innovative practices:

- City systems innovated when they committed to making GCEN participation complementary of district priorities, rather than a special initiative. City systems were most likely to make changes in strategies or policies when the projects that system leaders chose to focus on through GCEN were aligned to district improvement efforts. GCEN learning is most powerful when it is a catalyst for action on priorities that the system is already struggling with and prioritizing.
- City systems innovated when senior leaders committed to consistent involvement in GCEN. For system-level innovations to occur, system-level leaders with the authority to commit resources must be at the table. Systems made changes when leaders with decision-making authority were engaged in GCEN meetings, and in developing action plans for the system.

The evaluation also revealed areas for growth as participating GCEN cities progress from identifying solutions to challenging problems of practice to implementing new practices and strategies. The evaluation findings suggest capitalizing on network strengths and also offer the following recommendations for deepening the impact of the network:

- Expand the involvement of system leaders in the GCEN to include sectors beyond the education system. The education community needs to understand the ecosystem in which it is operating, form a team to change policy and approaches within the system as a whole, and bring assets from the whole community. The GCEN provides an opportunity for those conversations to occur.
- Develop a knowledge management and communication infrastructure that encourages ongoing sharing of resources and exchange of information and ideas among GCEN participants beyond the annual symposium; for instance, through shared resource folders, discussion boards, or other mechanisms that are more informal and interactive than current GCEN conference calls.
- Continue to emphasize practical learning and application to policy through pragmatic discussions of *how* and *why* approaches have worked in international systems, based in concrete examples and drawing on relevant successes—and failures—of participating systems.
- Increase opportunities to develop systematic processes for improvement and change that can offer models and guides for system leaders to think about how they plan and sustain innovation and learning, for the improvements that are directly related to GCEN participation, as well as other system reform efforts.

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At the core of the GCEN is the belief that by collaboratively discussing high-priority problems of practice and devising innovative strategies for addressing these, systems can leverage and adapt policies and practices across global contexts to enhance

GCEN Cities 2012-2016

2012-present

Denver, Colorado Houston, Texas Melbourne, Australia Seattle, Washington Shanghai, China Singapore Seoul, Korea Toronto, Canada

Additional cities:

Chicago, Illinois (2012-2013) Hangzhou, China (2015-present) Hiroshima, Japan (2015-present) Hong Kong (2012-2015) Lexington, Kentucky (2013-present)

educational success. Annual symposia advance this goal by focusing on priority issues identified by the host cities and Asia Society, and include school site visits, city reports and exchanges of ideas, and presentations from research and policy experts. In addition, in 2014 the GCEN formed working groups focused on topics that emerged as priority areas for participating cities: career and technical—or vocational—education (CTE/VET), and teacher professional learning. To date, these working groups have each met twice to participate in intensive workshops and to form plans that translate discussion into practice and policy changes. Asia Society supports a team of four from each system to attend each meeting; cities are encouraged to select high-ranking leaders and to promote consistent GCEN involvement, to maximize the relationships and learning generated throughout the network over time.

In spring 2015, Asia Society commissioned Policy Studies Associates (PSA) to conduct an evaluation of the GCEN that documents the ways in which participating cities are applying the learnings of the GCEN to implement innovations in policy and practice, and the factors that supported and hindered those innovations. This report summarizes those lessons learned, based on interviews in summer 2015 and again in spring 2016 with stakeholders from Denver, Houston, Lexington, Melbourne, Seattle, Shanghai, Singapore, and Toronto. The evaluation also included interviews in summer and fall 2015 with advisors to the Asia Society involved in planning and facilitating the GCEN, and observations of the professional learning working group in July 2015 and of the annual symposium in November 2015.

This report explores the following three analytic questions, presents vignettes describing learning and innovation in each city system as of spring 2016, and concludes with recommendations for the GCEN as it enters its next phase:

- How does the GCEN support innovation?
- What are the strengths of the GCEN?
- What factors enabled cities to maximize the benefit of GCEN participation?

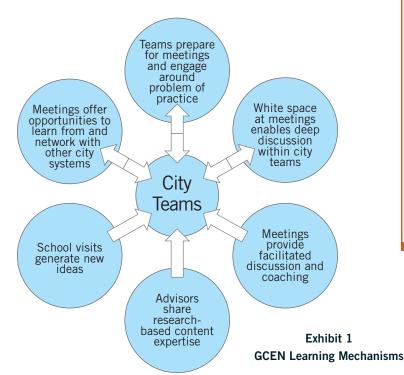
HOW DOES THE GCEN SUPPORT INNOVATION?

"Some of the best learning opportunities are when you step outside of your comfort zone and are exposed to new ways of doing things and then triangulate and bring back to your communities. [GCEN] has lived up to hopes and expectations in that way."

-GCEN city participant

erate discussion; and (3) expert advisors share research-based content expertise through presentations, discus-

sions, and coaching. Equally important, the GCEN promotes learning within city teams: teams prepare for each meeting by engaging around a relevant problem of practice, devote time and space within the meeting setting to deeply discuss challenges and solutions, and, ideally, take action steps to guide improvement and innovation following each meeting.



One of the explicit goals of Asia Society in developing the GCEN—at the outset of its creation in 2012—was to determine if an international network of cities could form an ongoing community of practice that would be beneficial and promote learning for all. The GCEN is designed to engage cities in learning through a variety of interconnected mechanisms, summarized in Exhibit 1. Central to the GCEN are annual symposia and working group meetings that bring city teams together to focus on a specific topic selected for each meeting. These meetings provide facilitated opportunities for external learning: (1) city teams exchange ideas with peers from other systems; (2) host cities organize school visits and provide expert analysis of their own systems to offer new ideas and generater-based content expertise through presentations, discusses

GCEN Symposia and Meetings

Symposia

Hong Kong: May 2012 Seattle: January 2013 Singapore: October 2013 Toronto: October 2014 Shanghai: November 2015

CTE/VET Working Group Meeting

Launch in Melbourne, 2014 ETH Zurich Summer Institute, 2015

Professional Learning Working Group Meetings

Launch in Shanghai, 2014
Improvement Science workshop at
the Carnegie Foundation for the
Advancement of Teaching, 2015

The external learning mechanisms of the GCEN offer focused and practical exposure to ideas for innovation. A unique contribution of the GCEN symposia—compared to other international educational conferences—is the opportunity to bring together senior-level system leaders and practitioners to delve deeply into problems of practice to facilitate learning and information sharing. The GCEN offers the potential to investigate a topic deeply, rather than broadly. As one GCEN participant described, "There is a host city you are going deeply into. Usually at a conference, there is a theme that sessions go around. Here, there, is a place that you are going deep into, the leaders are there, you get to ask questions, you get to process that with other cities and your own city team while you are there. As opposed to getting lots of different pieces of information, you are going pretty deep. By the end you come away with a clear understanding."

In addition, city leaders have valued the introductions to respected experts and particularly the opportunities to get direct advice and hands-on feedback from them: "I have found that kind of access to really clever and smart people to be really quite wonderful, and that opportunity to hear thoughtful, well-informed reflection, sometimes quite provocative, to be really quite useful."

The GCEN also creates an environment for city leaders to learn—on a very pragmatic level—how practices get implemented in instruction, in supports, and in policies. One leader commented: "We all know the elements. The magic is in how people do it." The school visits organized in conjunction with the annual symposia have been a powerful element of bringing this pragmatic perspective to the GCEN, both as a means of showcasing practice and of grounding discussion. Another leader noted, "It's useful to anchor this work in real classrooms. It's helpful for different systems to come together, and discuss the characteristics of good instruction. Clearly we are not all normed. This helps us calibrate what we value and what we think is important." Cognizant of the significant differences in the cultural and structural contexts of the participating cities, the GCEN is designed to address universal themes in education—such as how supports for teachers contribute to student learning—by providing a platform for leaders to share strategies, reflect on common cross-context approaches, and consider adaptation of effective elements within their own context.

The structure of the GCEN also promotes intra-team learning and reflection that is essential to innovation and change. A consistent benefit of GCEN participation cited by system leaders is that the goal-oriented structure of the symposia and working group meetings compels within-system discussions and strategizing that sometimes get neglected—absent the accountability of the GCEN—when confronted with the day-to-day realities of operating a city school system. Preparing for a GCEN meeting—whether preparing a presentation or completing a pre-meeting assignment, such as brainstorming a process map outlining root causes of problem of practice—"forces us to have to get together and talk about things."

Within the context of GCEN meetings, city teams are given "white space" in which to reflect, process the learning, and begin to make plans for implementation and innovation within their own systems. Having this time and space within a focused and facilitated setting, away from the daily pressures of the system, increases the chances of identifying concrete steps for new ideas to take root. A system leader commented that: "What's interesting about participating is that it gives an opportunity away from the obstacles to think creatively about the system and have time to think about cultural underpinnings, shake those out, and think about what it could look like in the U.S."

WHAT ARE THE STRENGTHS OF THE GCEN?

"That's the power of the network; there's no question for which one district has all of the answers."

-GCEN city participant

Distilling the primary strengths of the GCEN in its first four years highlights some strategies that the network can continue and scaffold as it continues to support implementation of new practice and policies in participating cities.

Perhaps most importantly, the GCEN has created a community of practice among participating city systems, in which all can learn and all can share elements of good

practice. While different cities have taken turns hosting GCEN symposia and showcasing their education systems, no system has been perceived as the standard bearer of all promising practices; each city has brought strengths and challenges to the network to share with other systems as part of a collaborative learning experience. According to one system leader, "The real strength is that we have a genuine continuum of practice. Everyone has something to be proud of, a next stage of improvement, and challenges. [There is] a willingness to share and be honest; the network has fostered an environment where people are honest." The opportunities to interact with other systems, to hear their challenges, and to understand implemented strategies that they were able to adapt and integrate have been valuable for GCEN systems as they plan their own next steps. Another GCEN participant commented that because their system is often considered to be high-performing, organizations often invite them to present or be showcased. While this can be flattering, "we don't just want to show off or present. We want to learn as well." The GCEN provides an opportunity for all systems to be "a learner and a listener."

The GCEN offers access to international expertise and experience that promotes reflection and lends credibility. Engaging with international school systems, meeting with the education experts convened by the GCEN, and receiving feedback and advice on proposed strategies lends credibility to the innovations that GCEN teams propose for their home systems. According to one system leader, workshopping ideas for innovation at GCEN convenings instills "credibility with the board and with other members of the leadership team, because we have run [the ideas we propose] by folks [with respected experience and expertise]." GCEN offers cities "an opportunity to check in with critical friends" as they progress through the implementation of pilots, projects, and new policies. This global learning and perspective can bring valuable perspectives to local contexts, as has been the experience in Shanghai (see vignette).

Shanghai: Expanding Awareness of Global Trends in Education

For Shanghai, participation in the GCEN has provided an important channel for new ideas and new research in education from global perspectives. Although Shanghai participates in other international opportunities and events, the GCEN provides a different, more focused structure for a learning progression.

"The GCEN really enriched our vision and helped me as an individual to know more, and gave updated information on trends in the education field."

A Shanghai leader identified two learning benefits that have emerged from GCEN participation:

- Knowledge building: The materials and resources shared through the GCEN, both before and during the meetings by Asia Society, by expert advisers, and by other GCEN systems, expose Shanghai leaders to information of which they would not otherwise be aware. The GCEN is a source of information that can in turn be shared more widely with colleagues in Shanghai to further inform new practices and policies. For example, following the GCEN symposium in Seattle where there was discussion about 21st century competencies, a Shanghai GCEN representative used materials from that meeting to demonstrate global relevance of that topic and advocate for resources to study the development of 21st century competencies and their integration into policy and practice in China.
- Relationship building: Participating in GCEN has introduced the Shanghai delegation to government officials, university researchers, and members of nonprofit organizations and think tanks from around the world, expanding the range of practice and research perspectives that informs policymaking and decisions in Shanghai.

The applied approach of the GCEN amplifies these benefits. Through discussions and school visits that are part of the annual symposium, Shanghai leaders have gained ideas for how to transform knowledge into practice, beyond what is feasible solely from reading reports or attending conferences.

The GCEN supports cities in the implementation of innovation through training and with access to new tools and processes. GCEN cities face challenges on how to systematically implement new approaches and assess their effectiveness. In summer 2015, a GCEN advisor commented that the "GCEN until today has concentrated a lot on the why; in the next move they should concentrate a lot on the how." GCEN has begun this transition to supporting the process of implementation by offering workshops and exposure to research-based strategies for designing and testing new approaches. For example, in June 2015 the professional learning working group applied methods of improvement science to problems of practice identified by the city teams at a workshop led in partnership with the Carnegie Foundation for the Advancement of Teaching. In addition, in November 2015 Harvard professor Jal Mehta offered a session on human-centered systems design to all cities at the Shanghai symposium. Both approaches encouraged new systematic strategies for tackling challenges and identifying solutions. City teams have embraced the notion of conducting root cause analyses as part of identifying solutions to challenges they face, including Singapore in its efforts to increase teacher participation in networked learning communities (see vignette).

Singapore: Increasing Teacher Engagement in Networked Learning Communities

Networked learning communities (NLCs) are viewed as key in raising the professional standards across the fraternity of teachers in Singapore. Using the improvement methods that were the focus of the GCEN's professional learning working group meeting, the Singapore team mapped out and identified possible root causes for a lack of participation among teachers in NLCs, in order to strategically deter-

"We had to look at the issue from the user perspective."

mine how to change its approach. Tensions between professional development responsibilities and teaching responsibilities emerged as a core challenge.

The Ministry of Education (MOE) decided to focus efforts on the Lead Teachers, pedagogical leaders and mentors whose roles and responsibilities in schools, clusters, and at the national level align well with the NLC concept. The MOE conducted sessions with Lead Teachers, sharing the benefits of NLCs and discussing ways to facilitate the working of an NLC. The MOE, however, did not stipulate that Lead Teachers were required to take on the new responsibility of leading NLCs or impose a number of NLCs for Lead Teachers to lead. "We plant the seed and hope that the plant will germinate. We are not saying that all teacher leaders have to embark on this, but we are sharing with them platforms and structures where they can collaboratively inquire into their practice, and the knowledge and skills necessary to facilitate this professional collaborative inquiry."

The goal is that by making NLCs more organic than prescriptive, NLCs will be perceived by teachers as a relevant and useful mode of professional development to enhance their practice when necessary. Knowing that launching an NLC is an option, teachers have a structure in place to engage with colleagues from across schools in professional conversations to tackle pedagogical or assessment challenges as they arise in real time. "When they encounter a problem, and they would like to collaboratively inquire into the issue with their peers, they can start a network."

WHAT FACTORS ENABLED CITIES TO MAXIMIZE BENEFITS OF GCEN?

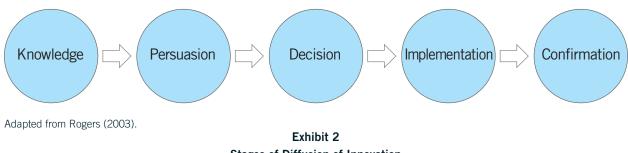
"For the impact of any initiative to be seen in any education system, in any city, or in any country, it will take time."

-GCEN advisor

Education innovation takes time: education systems are complex, entrenched in practice, and engaged in continual processes of teaching and learning. Change therefore typically occurs in gradual ways, requiring commitment and persistence. Through the learning mechanisms described above, the GCEN offers city systems knowledge and tools to identify innovative approaches for improvement—informed by international best practice—and support to adopt these new approaches. For a new innova-

tion or practice, the stages of diffusion defined by Rogers (2003) provide a framework for thinking about this process (see Exhibit 2).

While GCEN school visits, discussions, and presentations can make city teams aware of new strategies, the city teams also need to progress through these stages of diffusion in order for innovation and change to occur. In the GCEN design, city teams identify root causes of problems of practice and develop practical strategic solutions—informed by new knowledge of international practice. After identifying and agreeing on proposed new strategies to address the problems of practice, city teams then move to the implementation phase—often through a pilot phase in which they experiment on a small scale, test, and refine each innovative strategy, before confirming its effectiveness and adopting it system-wide. To get to that implementation phase, however, city teams must convince (or persuade) others within their systems that the proposed innovative strategy is worthwhile, well-conceived, feasible, and likely to be effective, so that the decision is made to move forward with the strategy and resources are committed.



Stages of Diffusion of Innovation

The next section of this report highlights the factors that facilitated movement from "knowledge" to "implementation" among GCEN systems. In interviews, city leaders reflected on the changes that GCEN participation promoted through exposure to new ideas and practices, and on the steps systems have taken resulting in innovation. Vignettes highlighting changes occurring within each city illustrate the stages of diffusion of innovation.

City systems innovate when they commit to the GCEN principle that network participation is complementary of systemic priorities, rather than a special initiative. GCEN participation is more effective—and has a greater impact—if participation is considered neither a discrete project for a city team, nor a professional learning opportunity for members, but rather a building block of the system's improvement efforts. This principle is fundamental to GCEN design, and, as described below, continues to evolve as city teams develop cohesion and priorities for network participation.

Organizational theory suggests that city systems will be most effective at adoption and sustaining change when resources are aligned toward a common goal and change effort (see box on page 8). From the perspective of the participating systems, this means ensuring that GCEN participation is intentional and connected to ongoing change efforts in the system. The GCEN network is more impactful when GCEN cities have a clear vision for why they want to become involved, and what they hope to achieve through their involvement. In this sense, GCEN can be considered a catalyst for taking actions on priorities that systems have been grappling with.

Research on Conditions that Support System Change

Organizational theory and research suggests that systems that are most effective at adopting and sustaining change:

- Have central capacity to absorb change and new ideas, balanced with enough stability to not always be aggressively searching for change
 - Determine which promising innovation should be undertaken, and stick with it
- Align resources across departments towards a common goal
 - Develop linkages between central office and schools to support change efforts
- Commit to continuous improvement
 - Focus on changing processes as much as—or more than—changing content

(Adapted from Johnson & Chrispeels, 2010; Levin et al., 2012; Mourshed et al., 2010; Winter, 2003)

According to one leader, "GCEN didn't start the work, but contributed to increased discussion and to my capacity to facilitate discussion in a deeper kind of way."

For Asia Society, as a network convener, this perspective means embracing the complementarity role of the GCEN as one of multiple interrelated learning communities and improvement strategies in which cities engage. An Asia Society advisor described the GCEN as "a network of networks" and emphasized that when considering the value of the GCEN—or determining its next steps—it is important to acknowledge that the GCEN systems and participants are "part of other systems and jurisdictions, rather than treating this as something that is concrete. [GCEN cities] need to connect various sources of knowledge generation and knowledge transfer." One of the roles of the GCEN network is to provide the cities with the tools to enable that transfer of knowledge to occur. For instance, in Seattle, participation in the GCEN has served as a launching pad for additional strategic improvement efforts and consultation, designed to deepen the effectiveness of the work initially begun through the network (see vignette).

This balance is challenging for system leaders who are faced with competing demands and who need to carve out time to continue GCEN work. As one leader commented, "How do cities balance between what they need to do for continued participation [in network activities] and doing the real work that needs to be done? [GCEN] can't be seen as an add-on." The Houston team benefited from this mindset, using the GCEN meetings and team time to garner information and spark ideas that were directly relevant to ongoing system discussions (see vignette). This approach enabled both the content of the international learning opportunities and the tools and approaches that the GCEN offered to be transferred and adopted easily within systemic processes, ensuring that participation of leaders meaningfully contributed to advancement within the system. According to one Houston leader, "We are using real problems that we are encountering every day, so it's easy to refer back to what we did [in GCEN meetings] because we have to go back and grapple with those issues." Similarly, a participant from another system commented that "these were things that we were thinking about already, it accelerated our learning," which allowed for more rapid transferal of new ideas to be implemented in the system.

Aligning Resources to Invest in the Development of Teacher-Led Professional Learning Communities in Seattle Public Schools

Seattle Public Schools (SPS) has developed a three-year plan for engaging teachers to serve as teacher leaders in professional learning communities (PLCs), with the goal of developing formative assessments and lesson plans to support instruction around these assessments. The idea of PLCs facilitated by teacher leaders emerged from learnings and observations in Toronto's system, whose common language around collaboration impressed the Seattle team. Although SPS had already created protocols for PLCs, the approach was not gaining traction.

Through a cycle of inquiry encouraged by the GCEN professional learning working group meeting, the SPS team realized that having protocols for a PLC was not sufficient, and that it would take time and space to test approaches to figure out how to make a PLC most effective in practice. In particular, it became clear that appointing a teacher leader in each PLC would help to gain traction within a school, and that the standards were not yet clearly understood enough for teachers to engage in efforts to develop formative assessments.

As a result, SPS took a step back to provide extra supports to help provide a strong foundation for the PLCs. First, district content experts have been assigned to each school, not to facilitate the PLC but to answer teachers' questions related to content and standards. Second, the district is investing in supports for helping teachers to develop the tools and capacities they need to engage effectively in the PLC work. The district has participated in Rick Stiggins' Assessment Training Institute (ATI), and the teacher leaders of the PLCs will continue to work over the next year with a consultant who is experienced in the ATI approach.

"How do you get to implementation, how do you ensure that you reach some level of consistency across the 97 schools? What will it take, and how long will it take? I have a sense of urgency around this work. But I have come to realize that to come to consistency and fidelity will take longer."

By using the ideas generated through the GCEN as a catalyst for and complement to additional district initiatives, rather than as a siloed project, the practices shared through the international network can begin to contribute in more holistic and sustainable ways to innovations in instructional improvement.

Other city systems struggled to ensure that the problems of practice that they selected as a focus for GCEN engagement, and the projects that emerged, were "deeply entrenched in our key priorities" and aligned with "the strategic direction that lots of members of our [system] team could connect with." Absent this alignment, the GCEN projects failed to get traction within the system because they were perceived as special initiatives. But some measures can help to ensure that GCEN participation and learning advances city systems' goals, including consulting with colleagues who are not members of the GCEN city teams and engaging them in the internal discussions required to plan for attendance at the annual meetings and post-meeting discussions, and staying flexible in adapting plans to incorporate shifting priorities. This is not easy; city education systems often have leadership transitions and external forces that dictate changes in priorities. However, spreading knowledge

Creating a Culture of Professional Learning in Houston Independent School District

Over the past year, the Houston Independent School District (HISD) has put into place a new system of coaching and supports for teachers and school leaders, designed to create a more collaborative learning culture for teachers. HISD created clusters of approximately five campuses, including both struggling schools and a "demonstration" campus, with similar demographic composition but different performance outcomes. Each cluster is supported by the district's School Support Office—which coaches principals and helps to leverage best practices of schools from throughout the cluster—and by two teacher development specialists—focused on literacy and on math/science—who support professional learning communities (PLCs) on each campus.

This approach was directly informed by the practices from other systems that HISD leaders were exposed to through GCEN participation. HISD leaders reported learning strategies for PLCs from Seattle, about school culture and climate from Toronto, and about building collaborative learning spaces from Singapore, and brought back elements of these new practices to HISD. These ideas could then be rapidly integrated and applied because the HISD leaders who had come to the GCEN with the goal of making innovations, were consistently involved and had the authority to make decisions and implement new professional development systems.

The HISD GCEN team capitalized not just on the opportunity to be exposed to new practices through the network but also to learn new tools that would help specify and refine proposed strategies. For instance, the team mapped the vision for the professional learning culture desired in Houston, articulated the existing supports aligned with this vision, and identified the gaps in determining new supports and communicating the need for change. One of the new supports to be leveraged involved the use of running records as part of guided reading in the elementary grades, and the district, using a small group of teachers, piloted an online system and obtained feedback before scaling the approach throughout the system. "We've adopted the concepts from informal and formal testing of ideas, [for example through] focus groups and surveys."

Looking ahead, HISD leaders aim to build capacity to move beyond implementation of ideas to continually obtain feedback from those "doing the work and using the work" to ensure that new systems are working. Making this goal explicit is essential because, in HISD as in many urban systems, reflecting on implementation can be a "hard thing to do in a large district that moves fast: there is not a lot of time to stop and smell the roses."

among a broader team, communicating goals, and increasing awareness of the successes of GCEN projects can help improvement efforts stay relevant and withstand shifts within city systems. For example, engaging a cross-sector team to understand and represent multiple perspectives and interests in improving the career and technical education system helped Lexington navigate changes in leadership to keep change efforts moving forward (see vignette).

Committing to consistent involvement of senior leaders and decision-makers in the GCEN facilitates innovation. For GCEN participation to lead to adoption of new practice and new policy within a system, not only must the learning and innovations that emerge from participation be grounded in systemic priorities, but senior leaders must be involved in interpreting the influences of the GCEN and in shaping the

Systemwide Approaches: Engaging the Business Sector in Education (Lexington, Kentucky)

Lexington has embarked on a system-wide approach to rethinking its career and technical education (CTE) approach, and is now entering the early phases of implementation after extensive planning. The Business Education Network (BEN) convened the effort—sending the message that this is an issue that the whole community can galvanize around—and partnered closely with Fayette Public Schools

"Shifting learning from inside to outside school"

to explore new approaches and engage community stakeholders, with a goal of shifting the perception of CTE not just as a workforce or job training issue, but as a valuable approach to education for all students. In April 2016, the school board endorsed a new plan set forth by the BEN.

Exposure to other CTE systems through GCEN activities, and in particular the Zurich Summer Institute, helped Lexington crystallize the vision for interactions between in-school learning and outside-of-school learning to create a more rigorous system.

To complement the GCEN work, Lexington has also elected to be part of the Ford Next Generation Learning (NGL) project, which will provide direct facilitation and technical assistance to the school system as it embarks on the new CTE pilot. As part of launch activities, in spring 2016 high school principals visited Nashville—another NGL city—to learn from the apprenticeship system. For Lexington, the 2016-17 school year will serve as a pilot and planning year to identify an initial cohort of principals to begin to adapt and adopt the Nashville approach, and to forge connections with partner companies, universities, and technical schools to develop pathways for a model that extends the vision of education through grade 14.

The road to this pilot has not always been easy. "We pushed and pushed and pushed and saw so little progress." Leaders at the school district who were advocates of the work and who could communicate the educational value of CTE were slowed by transitions. Some stakeholders were slow to take action, and were willing to have meetings, but "actually getting [follow-through] was tough." However, as more stakeholders have become engaged and involved, the momentum has grown. Seeing and talking with international system leaders has brought credibility to new ideas; this was reinforced when a wide range of stakeholders participated in the GCEN Summer Institute for the CTE/VET working group, including representatives from the BEN and from the local Chamber of Commerce, allowing the work to gain traction and momentum beyond the school community.

adaptations and proposed ideas, ensuring that coherent approaches are articulated throughout the system's work. The Seattle team, grounded in the belief that including the practitioner voice in decision-making would ultimately contribute to more effective implementation of new approaches, initially included a contingent of teachers. However, while this approach to the GCEN team ensured that ideas included the teacher voice, it became important for leaders to also be involved, so that the work could ultimately influence system-level decisions. Thus the Seattle team's composition shifted (and expanded) to also include a deputy and regional superintendent, as well as the director of professional learning and a school board member. According to a teacher: "The team has to have someone who is central to influence. If a principal and teacher go, the unit of change will be the school, it won't be the district."

Consistency of membership in the GCEN is essential, both for benefits to materialize within participating systems, and for a cohesive learning community to be forged across systems within the network. Recognizing the frequent turnover of staff within education systems, the GCEN is structured so that each city team consists of four team members, increasing the likelihood of having one or more members remain on the team from one meeting to the next, in order to build on a foundation of relationships and build on the continuity of knowledge. Without this consistency, "it's hard to build momentum and continuity and alignment. When people change, it's hard to go full force" at the start of a meeting; instead, the need arises to re-establish introductions to each other and to the work rather than diving into a continuation of previous discussions.

Depending on the system infrastructure, in some cases the continuity of GCEN roles may supersede the continuity of individual GCEN participants. For instance, Singapore staff frequently switch roles within the government as part of the career ladder process. Although on the surface this might create challenges for imparting new knowledge, the intentionality of the grooming system and career ladder minimizes that. Information is well-documented and shared through formal reports and through discussions with colleagues, so that new knowledge is not dependent on the contribution of one specific GCEN participant. Similarly, within the GCEN, some participant movement and transition is expected and may even be beneficial to support the growth and the sustainability of the network. What is important is to have some degree of continuity to support the GCEN initiative in an intentional way.

Even with continuity in GCEN participation, however, when a GCEN team does not hold sway over system policies, it is a longer road to move from persuasion to decision to implementation, as is seen in Melbourne (see vignette). For impact to be felt in the cities, the GCEN team needs to consistently involve system-level decision-makers who have influence and authority over budgets, policies, and new directions, and who can "spread the wisdom, take the ideas, and run with them in a way that makes sense within the system." Without the presence and involvement of such decision-makers, a GCEN team will always have to advocate for the value of new ideas within the system, losing momentum, and slowing the diffusion process.

Laying Groundwork for Change in a Fragmented System in Melbourne, Australia

Melbourne operates in a complex policy context. Three sectors share responsibility for education—government schools, Catholic schools, and independent schools—and all respond to mandates from the state of Victoria education department. Representatives from the three sectors have been involved in GCEN, and focused their participation on strengthening the vocational and technical education system through the platform of the GCEN working group.

"I often refer to the experiences that I've been able to have through the GCEN. People are mindful of the international experience. I am now at the table for things that I was not at the table for before. I can increase my level of involvement."

Participating leaders have been energized by their GCEN learning. "I can reflect on first-hand knowledge—I can ask people and talk

about practices rather than reading a journal piece. That's one of the big benefits." Following the GCEN working group learning opportunity in Switzerland in July 2015, leaders took a "block step" approach in meeting with and developing interest across all the stakeholder groups involved in integrating workplace learning in education, including industry representatives, educators, school policymakers and regulators, and the higher education system. The goal—in bringing these practices to Melbourne—is to engage in discussions about how to create viable pathways and models for young people that better integrate curriculum with workplace learning, provide a practical mix of experiences, and facilitate the transition to the workforce. A first and necessary step is for all sectors to get on board and recognize the advantages of integrated approaches, such as those implemented in other countries.

However, the complexities within the system and the lack of formalized industry support are stifling progress, according to a leader. The centralized decision-making process differs from that of other cities, making change difficult. While the government recently released a statement supporting the apprenticeship system, which could have been seen as a sign of advancement, the GCEN leaders are not involved in these policy decisions and budgetary allocations. As a result, while GCEN participation has offered new ideas and approaches to certain leaders, translating those into actionable change has been a challenge. "It really energized me with learning from Switzerland but then I came back and the reality of the work required to run my unit made it difficult to act on these learnings." The lack of system-wide clarity and investment in the issue and in the GCEN as a mechanism for informing policy decisions has thus far limited the effectiveness of the network to make informed decisions to enhance their practice when necessary.

RECOMMENDATIONS FOR NEXT STEPS

As city systems progress to the next phases of improvement and launch innovations that germinate and begin to take root through network activities, the GCEN is at a crossroads. The network has provided ideas and tools for change and improvement, and the initial cohort of cities is now beginning to pilot changes that will take time to implement, assess, improve, and scale. This raises important questions for GCEN's role as a network: now that pilot projects are underway, what is the role of the network in supporting the development, improvement, and scaling process of these projects?

In resource-strapped systems, making the case for continuing involvement in an international network can be challenging, especially when the "result" of the involvement appears to already be in evidence through a new policy or practice. More than one GCEN participant noted that "there is doubt around international travel" within the system, from a political, financial, and use-of-time perspective. So, what is GCEN's ongoing contribution, and in what format? Four recommendations that emerged from the evaluation are presented below.

Expand leadership involvement in the GCEN. As suggested by the name, the original intent was for the GCEN to include leaders from city systems beyond just the education system. A few cities have done this with success, using the GCEN as a platform for engaging the larger community around issues of education. This has been a natural fit for two of the cities in the CTE/VET working group, Lexington (presented earlier) and Denver (see vignette). Encouraging this wider participation from all GCEN cities could help further demonstrate the value of the GCEN, deepen its impact, and increase the opportunity for the practices and innovations shared and discussed to gain traction within the communities. The education community needs to understand the ecosystem in which it is operating, form a team to change policy and approaches within the system as a whole, and bring assets from the whole community. The GCEN provides an opportunity for those conversations to occur.

Develop a knowledge management and communication infrastructure to enhance network interactions and learning. For GCEN city systems to effectively learn from and engage with each other, the structure of GCEN communications and interactions needs to evolve to be "more real and more just in time," as described by a system leader. For example, pairing cities with similar goals and projects would encourage more direct and engaged conversation to share practices, challenges, and engage around issues. "If I had a critical friend that was focused on something similar, that would make it easier and more natural [to share practice and] really have that back and forth." This type of engagement requires a trusting relationship that gets built over time—perhaps with facilitation from GCEN conveners or expert advisors at initial stages—capitalizing on the relationships that get formed in the more abbreviated interactions at meetings in the current GCEN model.

Denver Public Schools: Piloting a New Approach to Career and Technical Education for the State

Starting in summer 2016, Denver Public Schools (DPS) will be piloting an apprenticeship-based residency program to help high school students forge connections between their educational experiences and future career opportunities. The pilot will focus on four industry sectors—medical, advanced manufacturing, technology, and banking—and will initially include 250 students, growing to 400 in summer 2017. Students and employers will

"People are seeing this as bite size; we can do this. We were already moving in this direction. This is just the next step we hadn't envisioned before."

participate in an internship program over the summer, as a precursor for a full residency during the school year.

The success of getting to this phase hinged on the strategic inclusion of a broad base of business, education, and policy stakeholders, not just from within Denver but from across the state of Colorado. The Denver team brought a group of eight representatives—investing resources beyond GCEN's contribution—to the summer institute in Zurich, focused on the apprenticeship system. According to the DPS leader, "That made a big difference in impact. Otherwise, it's just convincing me. [With the big group] there's much more power, and a good mix of education and government representatives. During that trip, we worked hard. We would stay for 4-5 hours after the scheduled program to plan, and that planning time was critical for us to create a vision to see where we want this to go in Colorado."

Denver continued to build on that momentum, next bringing a delegation of 50 government, education, and business leaders back to Switzerland for a four-day trip, including the governor, CEOs of large and small businesses, and representatives from K-12 education, two-year colleges, and four-year colleges. "Everyone finally got this. [Before not all groups saw] themselves as playing a role and being part of the solution. It was a game-changing moment." This approach will keep momentum going, even if there is turnover, because there was "a cadre of influential people on that trip."

The group has defined the skillsets and competencies that will be needed in industries moving forward, partnering with industry associations to define these competencies. To raise the visibility of the pilot and to ensure its success and sustainability, there has been a big emphasis on communications and messaging among parents, educators, and funders. The district leader emphasizes that although the foundation has been laid and a lot of interest has been generated, the hard work is still ahead: "It's a slippery slope to have the rhetoric ahead of implementation. The pilot has to be high-quality or we have nothing." The next two years of testing and strengthening the model will be key to building on the current momentum.

Maximizing the potential for this network will require both Asia Society and GCEN cities to make commitments to enhance communications. "There needs to be intrinsic motivation to participation, but there also needs to be a platform" for that ongoing participation and communication. For Asia Society, the current communications infrastructure for the GCEN is not perceived as conducive to allowing this ongoing engagement and professional learning between cities. For cities, commitment is required to reach out, remain involved, and share knowledge. One member summarized a common sentiment: "I thought that there might have been a stronger connection between the cities and that hasn't happened. We are all busy and have our own agenda, our own challenges." When outreach occurs, it is typically to follow up for specific requests for information or materials that were mentioned at a GCEN meeting.

Asia Society could address this concern by developing a knowledge management infrastructure that helps to facilitate the gathering of resources and exchange of information among participants; for instance, through shared resource folders, discussion boards, or other mechanisms that are more informal and interactive than current GCEN conference calls. GCEN conveners and advisors could monitor and contribute to these discussions—and should actively encourage participation—but allowing them to flow naturally based on the relationships that have been formed could result in more sustained and focused conversation on participants' own terms and timelines.

Continue to emphasize practical learning and application to policy. The multiple learning mechanisms of the GCEN have been a strength of the network, but what has distinguished the network as a valuable resource for participants has been the pragmatic nature of discussions and the opportunity to understand *how* and *why* strategies and approaches have worked in international systems. Asia Society must ensure that the network remains engaged in practice and focused on learning from the shared experiences of international systems facing similar challenges and opportunities, especially as the network enters its next phase. One member cautioned that sometimes the meetings have been "too academic, and not practitioner-focused enough; too dominated by academic theory and discussion, as opposed to talking to practitioners about how to implement practice."

Moving forward, the GCEN can build on its practice-based strength by delving deeply into the problem of practice of a single system as a springboard for discussion in a given meeting, with each city lending insight based on experience, modeling the process of working through problems and solutions and drawing deeply on the shared knowledge of the network.

This approach can also help to provide structure and direct the facilitation of certain activities, such as the school visits, to ensure that the learning outcome is evident and that discussion enables GCEN members to distill elements of promise for system-wide innovation. One leader emphasized needing more of this framing: "How do [the school visits] relate back to what we're going to be doing in the future. They need to frame why they pick the schools they pick. What is the kernel? What are we supposed to take away?"

Increase the opportunities to develop systematic processes for improvement and change. As described earlier, the GCEN has begun to introduce cities to tools and frameworks for improvement through workshops on improvement science (for the professional learning working group) and on User-Centered Design. Leaders are enthusiastic about the opportunities to engage in and try out new process approaches through the GCEN. "Process is really important for us as leaders in the room. Learning a new process is likely to be more sustainable for us than just content knowledge. We use processes in a daily way. Ultimately, learning about processes and ways of thinking is a more powerful model for the leaders who come to these sessions." However, as the Toronto experience suggests (see vignette), it will likely be necessary to train more deeply in improvement science methods if such a process is to drive system efforts.

The first four years of the GCEN demonstrated that when city systems commit to participation and to innovation, the structured international learning opportunities offered through the network can help city systems gain knowledge of new practices and strategies to address local problems of practice in education.

Toronto District School Board: Using Tools for Improvement

Participation in the GCEN has exposed the Toronto District School Board (TDSB) to new tools and approaches for system-level decision making. While TDSB has been highlighted within the GCEN as having innovative structures for leadership and supervision, TDSB leaders note that "on the ground, we are bombarded by a lot of priorities." TDSB has begun to use tools and processes learned through the GCEN and grounded in improvement science strategies

"Because improvement strategy is not specific to content, it has the opportunity to be a real legacy of the Global Cities Education Network."

to more systematically make decisions that are coherent in approach across the district and responsive to the needs of students.

For example, the district is integrating flow charts as a mechanism for analyzing conditions for success and for providing supports to schools. As a trial of this approach, district support teams went to schools demonstrating success in early childhood education to examine what schools were doing that was contributing to success, and documented this process in flow charts. This systemic approach enabled the support teams to more easily identify promising approaches to share with other schools. Teams have begun adopting this strategy of using the flow chart tool as a way for distilling good practices in other educational settings to guide improvement. A district leader described the approach as the "idea for studying where something works rather than gazing at the deficit. That has become part of our leadership."

Utilizing this approach effectively requires district commitment. In TDSB, new leadership is committed to data-driven improvement and to investing district resources to train the executive team in improvement science approaches. "We need more people to be knowledgeable about improvement science if it is going to be one of the tools we use to move the system forward. It can't be situated in three people." Ultimately, TDSB hopes that training in improvement methods will trickle down—if not be formally extended—to staff throughout the district.

Several systems have already taken concrete steps to pilot new approaches. As the GCEN continues to evolve, and as systems begin to implement innovative solutions to the problems of practice identified through network participation, they are likely to need support in determining whether a solution is working—and how to strengthen it—for the innovation to be adopted. A renewed emphasis within the GCEN on developing new processes for learning and on providing structures for city teams to share successes and challenges, pose questions, and suggest ideas, can help ensure that the innovations continue to be nurtured and refined in order to lead to sustained change and improvement.

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